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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,642	02/28/2002	Katsuhiko Hiramatsu	L9289.02131	3592
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STEVENS DAVIS MILLER & MOSHER, LLP 1615 L STREET, NW SUITE 850 WASHINGTON, DC 20036			EXAMINER AGHDAM, FRESHTEH N	
			ART UNIT 2611	PAPER NUMBER

DATE MAILED: 10/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/069,642

Applicant(s)

HIRAMATSU ET AL.

Examiner

Freshteh N. Aghdam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 17-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26 and 27 is/are allowed.
- 6) ☒ Claim(s) 17-20 and 25 is/are rejected.
- 7) ☒ Claim(s) 21-24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed 7/18/2006 have been fully considered but they are not persuasive.

Applicant's Argument(s): On page 10, regarding claims 17 and 25, applicant argues that the claimed invention is not taught or suggested by Parkvall "receiving information of the pilot channel's quality from a communication terminal... using information of the base station's established transmit power values for the control and data channels in determining the modulation and coding systems to apply to the transmitted data channel signal, as recited in claim 17." On page 11, regarding claim 19, applicant argues that the claimed invention is not taught or suggested by Parkvall "estimating the reception quality of a data channel signal, to be received at a communication terminal apparatus, based on: (1) information of the reception quality of a control channel signal measured at the communication terminal apparatus and (2) transmit power values of the control and data channel signals sent by a base station apparatus."

Examiner's Response: Regarding the argument made for claims 17 and 25, Parkvall teaches a base station apparatus comprising a receiver section that receives information of the reception quality of a control channel signal (block 62 of figure 4) measured at a communication terminal apparatus (Col. 2, Lines 16-19; Col. 3, Lines 1-9; Col. 7, Lines 28-35); a deciding section that decides a modulation system and coding

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system (Fig. 4, means 62, 54, 56, and 60) used for a packet data to be transmitted to a terminal apparatus based on the information of the reception quality of said control channel signal and transmit power values of the control channel and the data channel signal at the base station apparatus, wherein the maximum data throughput that is sustained for a given level of transmission power (Fig. 4 and 11; Col. 11, Lines 12-26) as it is recited in claims 17 and 25. Regarding the argument made for claim 19, Parkvall teaches an estimation section that estimates the reception quality/transmission rate of the data channel (Fig. 11, means 150 and 152); Parkvall does not expressly teach that the reception quality of a data channel is based on the reception quality of the control channel signal and the transmission power values of the control channel signal and data channel signal sent from the base station. Laakso teaches estimating the reception quality of the data channel signal based on the reception quality of the control channel signal and the transmission power values of the control channel signal and data channel signal (Col. 3, Lines 13-20 and 58-67; Col. 4, Lines 1-6, 17-25, and 59-64; Col. 11, Lines 39-59), wherein since the control channel signal and the data channel signal are actually on the same channel but the power control bits are used to determine the quality of the connection; therefore, the power control bits are used to determine the reception quality of the data channel signal as well.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17-18, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parkvall et al (6,542,736).

As to claims 17 and 25, Parkvall teaches a base station apparatus comprising a receiver section that receives information of the reception quality of a control channel signal (block 62 of figure 4) measured at a communication terminal apparatus (Col. 2, Lines 16-19; Col. 3, Lines 1-9; Col. 7, Lines 28-35); a deciding section that decides a modulation system and coding system (Fig. 4, means 62, 54, 56, and 60) used for a packet data to be transmitted to a terminal apparatus based on the information of the reception quality of said control channel signal and transmit power values of the control channel and the data channel signal at the base station apparatus, wherein the maximum data throughput that is sustained for a given level of transmission power (Fig. 4 and 11; Col. 11, Lines 12-26); transmitting means for transmitting the data channel signal according to a modulation system and coding system decided by the deciding section (Fig. 4; Col. 7, Lines 44-47). Parkvall does not expressly disclose that the maximum data throughput/ optimum modulation and coding scheme is based on both the transmission power values of the control channel and the data channel, wherein the transmit power values are variable. Since, the transmission power value is not changing

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for the link adaptation method and/ or apparatus of Parkvall; therefore, the transmission power value is the same for the control channel and the data channel signals at the base station. But this does not mean that the transmit power values are constant at all times (Fig. 11, means 152). Therefore, it would have been obvious to one of ordinary skill in the art to use the information regarding the reception quality of the control channel and transmission power values of the control and data channel signals to determine the modulation and coding scheme that results the maximum data rate.

As to claim 18, Parkvall teaches a communication method and/ or apparatus, wherein the reception quality of a control channel signal (block 62 of figure 4) measured at a communication terminal apparatus (Col. 2, Lines 16-19; Col. 3, Lines 1-5; Col. 7, Lines 28-35); transmitting means for transmitting the reception quality of the control channel signal to the base station apparatus (Fig. 4, Block 62; Col. 2, Lines 16-19; Col. 3, Lines 1-9; Col. 7, Lines 28-35).

Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parkvall et al, and further in view of Laakso et al (US 6,603,773).

As to claim 19, Parkvall teaches a terminal apparatus comprising a measuring section that measures the reception quality of a control channel signal (Fig. 4, Block 62; Fig. 11, Block 150 and 152; Col. 2, Lines 16-19; Col. 3, Lines 1-9; Col. 7, Lines 28-35); an estimation section that estimates the reception quality/transmission rate of the data channel (Fig. 11, means 150 and 152); and a transmitting section that transmits information of the estimated reception quality of the data channel signal to the base station apparatus (Fig. 4 and 11; Col. 7, Lines 28-36). Parkvall does not expressly teach

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that the reception quality of a data channel is based on the reception quality of the control channel signal and the transmission power values of the control channel signal and data channel signal sent from the base station, wherein the transmit power values are variable. Laakso teaches that the reception quality of the data channel signal is based on the reception quality of the control channel signal and the transmission power values of the control channel signal and data channel signal and the transmit power values are variable (Col. 3, Lines 13-20 and 58-67; Col. 4, Lines 1-6, 17-25, and 59-64; Col. 11, Lines 39-59), wherein since the control channel signal and the data channel signal are actually on the same channel but the power control bits are used to determine the quality of the connection; therefore, the power control bits are used to determine the reception quality of the data channel signal as well. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Laakso with Parkvall in order to control the transmission power with the aim of utilizing the radio resources efficiently (Col. 3, Lines 1-5).

As to claim 20, Parkvall further teaches: selecting means for selecting a target base station apparatus with the best estimated reception quality of the data channel signal from among all the base station apparatuses as the requested destination of the data channel signal (Col. 3, Lines 6-9) by the terminal apparatus; and transmitting means for transmitting the reception quality of the estimated data channel signal to the target base station (Fig. 4 and 11; Col. 7, Lines 44-47).

***Allowable Subject Matter***

Claims 21-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 26 and 27 are allowed.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Freshteh N. Aghdam whose telephone number is (571) 272-6037. The examiner can normally be reached on Monday through Friday 9:00-5:30 pm.

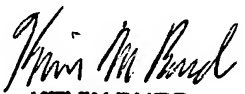
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Freshteh Aghdam  
September 19, 2006

  
**KEVIN BURD**  
**PRIMARY EXAMINER**